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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,346	01/11/2002	Bruce S. McLean	7678.585	9698

7590

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EXAMINER

HARRINGTON, ALICIA M

ART UNIT

PAPER NUMBER

2873

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/044,346

Applicant(s)

MCLEAN ET AL.

Examiner

Alicia M Harrington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/11/0-12/16/02.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-28 and 30 is/are allowed.
- 6) ☒ Claim(s) 1-5, 11, 29 and 31-35 is/are rejected.
- 7) ☒ Claim(s) 6-10 and 36-41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,6,7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The IDS filed on 3/13/02, 12/16/02 and 4/19/02 have been fully considered. The IDS filed on 4/22/02 was not considered for the following reasons cited in the MPEP:

§ 1.98 Content of information disclosure statement.

(a) Any information disclosure statement filed under § 1.97 shall include:

(1) A list of all patents, publications, applications, or other information submitted for consideration by the Office;

(2) A legible copy of:

(i) Each U.S. patent application publication and U.S. and foreign patent;

(ii) Each publication or that portion which caused it to be listed;

(iii) **For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion; and**

(iv) All other information or that portion which caused it to be listed; and

(3)(i) **A concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language. The concise explanation may be either separate from applicant's specification or incorporated therein.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3,4,31, 32,34,35 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanca (US 4,666,406).

Regarding claim 1, Kanca discloses a photo curing device with a lens (contoured lens #31-col. 3, lines 44-49; see figure 6) where the first end (34;col. 3,lines 60-65) receiving the light generation source (fiber) and curved second end (36-col. 4,lines 1-5); means for securely holding the lens (see figure 4) adjacent the light source; and means for protecting the lens (26) from contact.

Regarding claim 3-4, the lens is aspheric shape of parabolic curvature (see figure 6).

Regarding claim 31-32, 34-35 Kanca discloses a photo curing device with a lens (contoured lens #31-col. 3, lines 44-49; see figure 6) where the first end (34;col. 3,lines 60-65) receiving the light generation source (fiber) and curved second end (36-col. 4,lines 1-5); means for securely holding the lens (see figure 4) adjacent the light source; and means for protecting the lens (26) from contact. And Kanca discloses an extension arm (12) and main body (see figure 3). The lens designed to be affixed to the fiber rod or integrated with the fiber rod (see col. 3,lines 45-50).

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5, 11, 29, 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanca (US 4,666,406).

Regarding claim 2, Kanca fails to specifically disclose the lens comprises one of the claimed material. However, the Examiner takes official notice that lenses made of the claimed material, especially glass and plastic is well known in the art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanca, to design a lens from these claimed materials, since they are well known materials and the materials provide for a lens with known light transmittance qualities.

Regarding claim 5, Kanca lens is aspherical. However, the Examiner takes official notices that lens with hemispherical curvature is also to direct/focus light. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanca, to design the second end of the lens in hemispherical format, since it is well known in the art.

Regarding claim 11, Kanca fails to specifically disclose the light generation source is a LED. However, the Examiner takes official notice that LEDs are notoriously well known light sources for use in photo curing. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanca, to include a LED light source since it is well known, and controllable and cheap source of lighting.

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Regarding claim 29, Kanca fails to disclose an embodiment where the light source and lens are not abutted. However, the Examiner takes official notice that it is notoriously well known to design a lens and light source in dental photo curing equipment not to abut. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanca to provide a lens for focusing light that doesn't abut the light source, since it is a well-known design in the art.

Regarding claim 33, Kanca fails to specifically disclose the light generation source is a LED. However, the Examiner takes official notice that LEDs are notoriously well known light sources for use in photo curing. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kanca, to include a LED light source since it is well known, and controllable and cheap source of lighting.

Allowable Subject Matter

Claims 6-10, and 36-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 12-28,30 are allowed.

Regarding claim 6, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed

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features as presented in independent claims, which include the means for holding and means for protecting comprise a transparent shield as claimed.

Regarding claim 12, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include a transparent shield configured so as to hold the first end of the lens adjacent to the light and protecting the lens from contact as claimed.

Regarding claim 18, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include a transparent shield configured to protect the lens from physical contact during use.

Regarding claim 36, prior art taken either singularly or in combination fails to anticipate or fairly suggest the limitations of the dependent claims, in such manner that a rejection under 35 U.S.C 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims, which include the lens being removably attached to the extension arm by means of a transparent shield as claimed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Nosov (US 6,208,788) discloses an apparatus and methods for concentrating light through fiber optic funnels coupled to dental light guides;

Calderwood (US 6,402,511) discloses a pathogen barrier with optically transparent end;

Lehrer (US 2002/0085372) discloses a portable reading light device; and


Lundvik (US 5,797,740) discloses a dental instrument.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M Harrington whose telephone number is 703 308 9295.


The examiner can normally be reached on Monday - Thursday 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on 703 308 4883. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7724 for regular communications and 703 308 7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.


AMH
March 20, 2003

Alicia M Harrington
Examiner
Art Unit 2873


RICKY MACK
PRIMARY EXAMINER